

We Claim:

1. A method for operating a bar code reader system having a first hand held bar code reader, a second hand held bar code reader and a host processor, wherein both of said readers have memories, said method comprising the steps of:

- (a) querying with use of said host processor programming data of said first hand held reader;
- (b) receiving said programming data at said host processor;
- (c) encoding with use of said host processor at least one bar code symbol, said at least one bar code symbol being encoded such that when said at least one bar code symbol is read by said second hand held bar code reader, said programming data originally included in said memory of said first bar code reader is loaded into said memory of said second hand held bar code reader;
- (c) outputting said at least one bar code symbol encoded at step (b); and
- (e) reading using said second hand held bar code reader said at least one bar code symbol output at step (d) so that said second hand held bar code reader is reprogrammed.

2. The method of claim 1, wherein said querying step includes the step of querying with use of a nonintegrated host processor, nonintegral with respect to said first hand held bar code reader reprogramming data of said first hand held bar code reader.

3. The method of claim 1, wherein said at least one bar code symbol is a single bar code symbol.

4. The method of claim 1, wherein said at least one bar code symbol is a series of bar code symbols.

5. The method of claim 1, wherein said at least one bar code symbol is a single two-dimensional bar code symbol.

6. The method of claim 1, wherein said outputting step includes the step of displaying said at least one bar code symbol.

7. The method of claim 1, wherein said outputting step includes the step of printing said at least one bar code symbol.

8. In a reading apparatus for scanning and decoding image data that is encoded in one of a plurality of types of optically readable indicia, in combination:

scanning circuit scanning said indicia and generating image data indicative of the data encoded therein;

a parameter memory space for storing a list of parameters including a plurality of parameters that define the operating modes of said apparatus, said list of parameters including a plurality of code options that identify the decoding programs that are and are not enabled for use during decoding;

a menuing memory space for storing a menuing program which enables a user at least to modify said list of parameters;

an I/O device through which a data source external to the reading apparatus may transmit reprogram requests and program data to said apparatus;

processing circuit for executing a plurality of decoding programs in an attempt to decode said image data, said processing circuit being programmed to respond to a reprogram request initiated by said external data source and to receive program data communicated by said external data source;

whereby said external data source may modify at least one of said list of parameters, said menuing program and said decoding programs.

9. The reading apparatus of claim 8, in which said decoding programs form parts of a 1D/2D autodiscrimination program, and in which said reading apparatus is adapted to receive from said external data source program data which modifies at least one of said decoding programs.

10. The reading apparatus of claim 9, in which said list of parameters includes parameters specifying which of a plurality of scanning-decoding relationships are to exist between the scanning and decoding activities of said reading apparatus during the execution of said 1D/2D autodiscrimination program.

11. In a reading apparatus for scanning and decoding image data that is encoded in one of a plurality of types of optically readable indicia, in combination:

an imaging assembly including a two-dimensional solid state image sensor reading said indicia and generating image data indicative of the data encoded therein;

a parameter memory storing a list of parameters including a plurality of parameters that define the operating modes of said apparatus, said list of parameters including a plurality of code options that identify the decoding programs that are and are not enabled for use during decoding;

a menuing memory space storing a menuing program which enables a user at least to modify said list of parameters;

an I/O device through which a data source external to the reading apparatus may transmit reprogram requests and program data to said apparatus;

processing circuit for executing a plurality of decoding programs in an attempt to decode said image data, said processing circuit being programmed to respond to a reprogram request initiated by said external data source and to receive program data communicated by said external data source;

whereby said external data source may modify at least one of said list of parameters, said menuing program and said decoding programs.

12. The reading apparatus of claim 11 in which said decoding programs form parts of a 1D/2D autodiscrimination program, and in which said reading apparatus is adapted to receive from said external data source program data which modifies at least one of said decoding programs.

13. The reading apparatus of claim 12 in which said list of parameters includes parameters specifying which of a plurality of scanning-decoding relationships are to exist between the scanning and decoding activities of said reading apparatus during the execution of said 1D/2D autodiscrimination program.

14. A method for autodiscriminating and decoding a bar code symbol that may be of any of a plurality of different types using an optical reading apparatus of the type having an image data memory and a list of parameters that specify the operating mode of said reading apparatus, said plurality of different types of bar code symbols including 1D linear bar code symbols, and 2D matrix bar code symbols, said 2D matrix bar code symbols having finder patterns that may be of any of a plurality of different types, comprising the steps of:

(a) reading said bar code symbol with said reading apparatus including a solid state image sensor to produce a set of image data there from;

(b) storing the set of image data resulting from said reading step in said image data memory;

(c) sequentially attempting to decode said set of stored image data as a 1D bar code symbol in accordance with a plurality of different 1D decoding programs, and

1.) if one of said attempts to decode said symbol as a 1D symbol is successful, outputting decoded data and then discontinuing said attempt; or

2.) if said attempts to decode said symbol as a 1D symbol are not successful, discontinuing said attempts and proceeding to step (d) hereof;

(d) sequentially attempting to decode said symbol as a 2D symbol in accordance with a plurality of different 2D decoding programs, and

1.) if one of said attempts to decode said symbol as a 2D symbol is successful, outputting decoded data and then discontinuing said attempt; or

2.) if said attempts to decode said symbol as a 2D symbol are not successful, or if none of said types of finder patterns is found, discontinuing said attempts;

(e) wherein step (c) includes the steps of not attempting to decode said symbol in accordance with any

one or more 1D decoding programs that are indicated to be disabled by said list of parameters; and

(f) wherein step (d) includes the steps of not attempting to decode said symbol in accordance with any one or more 2D decoding programs that are indicated to be disabled by said list of parameters.

15. The method of claim 14, in which said list of parameters includes a parameter which, when disabled, disables all of said 2D decoding programs.

16. The method of claim 15, in which said list of parameters includes a parameter which, when disabled, disables all of said 2D decoding programs.

17. The method of claim 14, in which said list of parameters includes parameters that specify corresponding scanning-decoding modes in which different respective relationships are established between said scanning steps and said decoding steps.

18. The method of claim 17, in which said scanning-decoding modes include at least one tracking mode.

19. The method of claim 17, in which said scanning-decoding modes include a plurality of non-tracking modes.

20. The method of claim 17, in which said scanning-decoding modes include at least one tracking mode and at least one non-tracking mode.

21. The method of claim 17, in which at least one of said parameters specifies a One Shot scanning-decoding mode.